REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-11 are pending in the present application. Claims 1, 3 and 5 have been amended and Claim 11 has been added by the present amendment.

In the outstanding Office Action, Claim 3 was rejected under 35 U.S.C. § 112, first paragraph; Claims 1 and 4 were rejected under 35 U.S.C. § 102(b) as anticipated by Arai et al.; Claim 2 was rejected under 35 U.S.C. § 103(a) as unpatentable over Arai et al.; Claim 5 was indicated as allowable if rewritten in independent form; and Claims 6-10 were allowed.

Applicant thanks the Examiner for the indication of allowable subject matter. In light of this indication, Claim 5 has been rewritten in independent form.

Regarding the rejection of Claim 3 under 35 U.S.C. § 112, first paragraph, Claim 3 has been amended to correspond with features shown in Figure 7, for example, and new Claim 11 has been added to correspond to features shown in Figure 8, for example. In more detail, according to the semiconductor device as recited in amended Claim 3, a metal block is provided to be in correspondence with at least one of the plurality of semiconductor elements, and a ceramic substrate extends over all of the plurality of semiconductor elements for forming an insulation unit. These features are supported by Figure 7 and the description at page 16, lines 3-7 and lines 15-17 of the present specification.

In a modification of the semiconductor device according to the first preferred embodiment illustrated in Figure 7, a metal block 3p of a P side is provided per power element 1p (see page 16, lines 4-7 of the specification). Further, all of the power elements 1p of the P side form an insulation unit and an insulating substrate 4p is provided to extend over

all these power elements 1p for forming the insulation unit (see page 16, lines 3 and 4 of the specification). The specification also recites at page 16, lines 15-17, that when the insulating substrate 4p is provided to extend over all semiconductor elements 1p for forming the insulation unit, a plurality of metal blocks corresponding to at least one power element 1 may be provided.

Further, regarding the semiconductor device recited in new Claim 11, a ceramic substrate is provided to be in correspondence with at least one of the plurality of semiconductor elements, and a metal block extends over all of the plurality of semiconductor elements for forming an insulation unit. These features are supported by the illustration in Figure 8 and in the description at page 16, line 8-12 and lines 17-20 of the specification.

In a modification of the semiconductor device according to the first preferred embodiment illustrated in Figure 8, the insulating substrate 4p of the P side is provided per power element 1p (see page 16, lines 10-12 of the specification) and the metal block 3p is provided to extend over all power elements 1p of the P side, i.e., over all power elements 1p for forming an insulation unit (see page 16, lines 8-10 of the specification). It is further recited at page 16, lines 17-20 that when the metal block 3p is provided to extend over all semiconductor elements 1p for forming the insulation unit, a plurality of insulating substrates 4 corresponding to at least one power element 1 may be provided.

Accordingly, it is respectfully requested this rejection be withdrawn.

Claims 1 and 4 stand rejected under 35 U.S.C. § 102(b) as anticipated by Arai et al. This rejection is respectfully traversed.

The outstanding Office Action states that Arai et al. disclose a ceramic substrate 301 joined to the second surface of the metal block 330 and having metal layers 312, 340 formed

on both surfaces. The outstanding Office Action also states that Arai et al. further disclose there is no other ceramic substrate interposed between the metal block and the ceramic substrate (see page 5, "Response to Arguments").

However, in the device disclosed in Figure 10 of Arai et al., a second ceramic substrate 320 is interposed between the second metal plate 330 and the first ceramic substrate 301 and the second metal plate 330 and the first ceramic substrate 301 are not directly joined.

In contrast, amended claim 1 includes a feature in which a ceramic substrate having metal layers formed on both surfaces is joined directly to the second surface of a metal block. That is, according to the semiconductor device recited in amended claim 1, unlike the device disclosed by Arai et al., there is not another ceramic substrate interposed between the metal block and the ceramic substrate. Further, the claimed invention has a better thermal diffusion characteristic than that of a device disclosed by Arai et al., where the second ceramic substrate 320 which will block thermal diffusion is interposed between the second metal plate 330 and the first ceramic substrate 301.

Further, in reference to the device shown in Figure 10 of Arai et al., an output terminal of a control element 5 is electrically connected to a base electrode 310B (see column 6, lines 56-58 of Arai et al.). In the device shown in Figure 10, when the second metal plate 330 and the copper plate 312 formed on the first ceramic substrate 301 (an emitter electrode 310E) are jointed by removing the ceramic substrate 320, the output terminal of the control element 5 would be electrically connected to both the base electrode 310B and the emitter electrode 310E, causing an inconvenience. Therefore, it is impossible to joint the second metal plate 330 and the first ceramic substrate 301 directly as in the claimed device.

Accordingly, it is respectfully submitted independent Claim 1 and each of the claims depending therefrom are allowable.

It is respectfully submitted the rejection of Claim 2 under 35 U.S.C. § 103(a) as unpatentable over Arai et al. has also been overcome as Claim 2 depends on Claim 1.

Further, it is respectfully noted that previously filed response at page 4, line 14 to page 15, line 2 argued that Arai et al. do not teach or suggest a technique for directly jointing the second metal plate 330 and the first ceramic substrate 301 by removing the second ceramic substrate 320. The outstanding Office Action at page 5 "Response to Arguments," states "Applicant's arguments ... have been fully considered ...". Therefore, it is respectfully submitted the current amendment to claim 1 does not raise a new issue.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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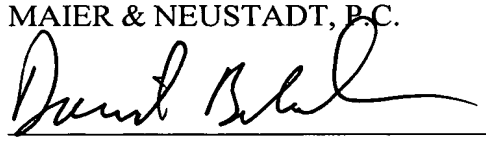

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